

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16. (Canceled)

17. (Currently Amended) A method of moulding a reinforced nodal structure, comprising:

depositing a cored reinforcement in and along channels of a nodal mould and across nodes of the nodal mould by repeated passes along the channels to at least partially fill the channels, the cored reinforcement comprising an envelope of strength-giving fibers surrounding a core of expansible material of substantially constant cross section;

closing the mould;

expanding the core of expansible material so as to cause the envelope of strength giving fibers to adapt to a shape of a corresponding portion of the channel; and

curing resin provided around the cored reinforcement; and

providing the reinforced nodal structure comprising a cellular structure formed from a network of walls formed by the strength-giving fibers impregnated with resin.

18. (Currently Amended) The method according to claim 17, wherein the cored reinforcement comprises an expansible foam core surrounded by a braided carbon fiber material.

19. (Currently Amended) The method according to claim 17, wherein depositing the cored reinforcement comprises overfilling the channels, and wherein closing the mould comprises compressing the cored reinforcement.

20. (Currently Amended) The method according to claim 17, wherein depositing the cored reinforcement comprises moving a feeder head relative to the mould and controlling a feed of the cored reinforcement under computer numerical control (CNC).

21. (Currently Amended) The method according to claim 20, further comprising severing lengths of the cored reinforcement in the feeder head under CNC.

22. (Currently Amended) The method according to claim 17, wherein depositing the cored reinforcement further comprises thermally tacking a layer of cored reinforcement to a preceding layer of cored reinforcement.

23. (Previously Presented) The method according to claim 17, further comprising introducing at least one insert in the mould to locally divert the reinforcement, to provide localized strengthening, and/or to provide a mounting point.

24-31. (Canceled)

32. (Currently Amended) A method of moulding a composite article, comprising:
depositing at least one length of an elongate cored reinforcement into a mould, the reinforcement comprising an envelope of strength-giving fibers surrounding a core of expansible material of substantially constant cross-section;
closing the mould;
reducing a pressure in the closed mould and expanding the expansible material from a first size to a second size, thereby causing the cored reinforcement to adapt to a shape of the mould and reducing void space within and around the cored reinforcement; and
curing resin deposited around the cored reinforcement.

33. (Previously Presented) The method according to claim 32, further comprising incorporating fabric inserts into the mould according to at least one member selected from the group of before, during and after depositing the at least one length of elongate cored reinforcement into the mould.

34. (Currently Amended) The method according to claim 17, further comprising incorporating fabric inserts into the mould by at least one member selected from the group of before, during and after depositing the cored reinforcement of substantially constant cross section in the mould.

35. (Currently Amended) The method according to claim 34, wherein incorporating fabric inserts into the mould comprises incorporating fabric inserts along the channels of the nodal mould and across the nodes of the nodal mould, wherein the fabric inserts extend in a longitudinal direction along at least one cored reinforcement of substantially constant cross section in the channel.

36. (Currently Amended) The method according to claim 35, wherein at least one fabric insert is positioned over a plurality of cored reinforcements of substantially constant cross section.

37. (Currently Amended) A method of moulding a reinforced nodal structure, comprising:

depositing a cored reinforcement in and along channels of a nodal mould and across the nodes formed in the nodal mould by repeated passes along the channels to at least partially fill the channels;

incorporating at least one insert in addition to the cored reinforcement along the channels of the nodal mould;

closing the mould;

expanding an expansible core portion of the cored reinforcement, the expansible core portion being of substantially constant cross section, so as to cause an envelope of strength giving fibers surrounding the expansible core portion to adapt to a shape of a corresponding portion of the channel; and

curing resin provided around the cored reinforcement, wherein the at least one insert extends in a longitudinal direction along at least one cored reinforcement in the channel.

38. (Previously Presented) The method of claim 37, wherein the at least one insert is a fabric insert that extends across a node formed in the nodal mould.

39. (Currently Amended) The method according to claim 38, wherein the at least one fabric insert is incorporated according to at least one member selected from the group of before, during and after depositing the cored reinforcement of substantially constant cross section in the mould.

40. (Currently Amended) The method of claim 38, wherein the at least one fabric insert is positioned over a plurality of cored reinforcements of substantially constant cross section.

41. (Canceled)

42. (New) The method of claim 18, wherein expanding the core of expansible material comprises adjusting a braid angle of the braided carbon fiber material and expanding the core of expansible material until the braided carbon fiber material is substantially conformal to the channels in which the cored reinforcement is deposited.

43. (New) The method of claim 17, wherein expanding the core of expansible material comprises controlling expansion of the core of expansible material based on a pressure or a temperature in the mould.

44. (New) The method of claim 43, wherein controlling expansion of the core of expansible material comprises reducing a pressure in the mould.

45. (New) The method of claim 43, wherein controlling expansion of the core of expansible material comprises increasing a temperature in the mould.

46. (New) The method of claim 17, wherein expanding the core of expansible material comprises adjusting a shape of the envelope of strength-giving fibers to correspond to an internal shape of a corresponding portion of the channels in which the cored reinforcement is deposited.

47. (New) The method of claim 46, wherein the expansion of the core of expansible material is not a maximal expansion of the core of expansible material.

48. (New) The method of claim 46, wherein the strength-giving fibers are substantially conformal to an internal shape of a corresponding portion of the channels in which the cored reinforcement is deposited at a point during an expansion process of the core of expansible material.

49. (New) The method of claim 46, wherein the envelope of strength-giving fibers comprises a braided carbon fiber material.

50. (New) The method of claim 49, wherein adjusting a shape of the envelope of strength-giving fibers comprises adjusting a braid angle of the braided carbon fiber material.

51. (New) The method of claim 46, wherein the core of expanded material is expanded until shape of the envelope of strength-giving fibers is substantially conformal to the channels in which the cored reinforcement is deposited.

52. (New) The method of claim 51, wherein the channels in which the cored reinforcement is deposited are of non-constant cross section, and wherein expanding the core of expansible material and curing resin provided around the reinforcement provides a reinforced nodal structure with a non-constant cross section.

53. (New) The method of claim 51, wherein expansion of the core of expansible material is limited by the internal shape of the corresponding portion of the channel.

54. (New) The method of claim 32, wherein the envelope of strength-giving fibers comprises a braided carbon fiber material, and wherein expanding the expansible material comprises adjusting a braid angle of the carbon fiber material as the expansible material expands, and expanding the expansible material until the braided carbon fiber material is substantially conformal to the mould.

55. (New) The method of claim 32, wherein the second size is larger than the first size.

56. (New) The method of claim 32, wherein reducing a pressure in the closed mould and expanding the reinforcement from a first size to a second size comprises expanding the core of expansible material so as to cause the envelope of strength-giving fibers to adjust to a shape which is substantially conformal to a corresponding portion of the mould in which the cored reinforcement is deposited.

57. (New) The method of claim 56, wherein the envelope of strength-giving fibers corresponds to an internal shape of the corresponding portion of the mould before the end of the expanding the core of expansible material or when a portion of the expansible material is in a non-expanded state.

58. (New) The method of claim 56, wherein the mould is of non-constant cross section, and wherein expanding the reinforcement and curing resin deposited around the reinforcement provides a reinforced structure of non-constant cross section.

59. (New) The method of claim 56, wherein the envelope of strength-giving fibers comprises a braided carbon fiber material, and wherein a shape of the envelope of strength-giving fibers is adjusted by adjusting a braid angle of the braided carbon fiber material.

60. (New) The method of claim 37, wherein the envelope of strength-giving fibers comprises a braided carbon fiber material, and wherein expanding an expansible core portion of the cored reinforcement comprises adjusting a braid angle of the braided carbon fiber material and expanding the expansible core portion until the braided carbon fiber material is substantially conformal to corresponding portions of the channels.

61. (New) The method of claim 37, wherein expanding the expansible core portion of the cored reinforcement comprises controlling expansion of the expansible core portion based on a pressure in the mould.

62. (New) The method of claim 37, wherein expanding the expansible core portion of the reinforcement comprises adjusting a shape of the envelope of strength-giving fibers to correspond to an internal shape of a corresponding portion of the channels in which the cored reinforcement is deposited.

63. (New) The method of claim 62, wherein the expansible core portion is expanded until the shape of the envelope of strength-giving fibers is substantially conformal to the channels in which the reinforcement is deposited.

64. (New) The method of claim 63, wherein the channels in which the reinforcement is deposited are of non-constant cross section, and wherein expanding the expansible core portion and curing resin provided around the reinforcement provides a reinforced nodal structure with a non-constant cross section.

65. (New) The method of claim 62, wherein the envelope of strength-giving fibers comprises a braided carbon fiber material, and wherein adjusting a shape of the envelope of strength-giving fibers comprises adjusting a braid angle of the braided carbon fiber material.